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## NEWS OF SOVIET PHYSIOTHERAPY

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## NEWS OF SOVIET PHYSIOTHERAPY

Fifth Scientific Session of the Institutes of Health  
Resort Science and Physiotherapy of the Georgian,  
Azerbaydzhan, and Armenian SSR's

/Following is the translation of an article by G.A. Ushveridze entitled "V Nauchnaya Sessiya Institutov Kurortologii i Fizioterapii Gruzinskoy, Azerbaydzhan-skoy, i Armyanskoy SSR" (English version above) in Voprosy Kurortologii, Fizioterapii i Lechebnay Fizi-cheskoy Kultury (Problems of Health Resort Science, Physiotherapy, and Excercise Therapy), No2, Mar/Apr 1960, pages 185-188. /

The session took place in Tbilisi 25-27 July 1960. Participating in the work of the session were representatives of the State Institute of Health Resort Science and Physiotherapy in Moscow and numerous representatives of health resort and physiotherapeutic science of Georgia. Some 40 reports, which shed light upon problems treated by institutes in 1958 were heard at the session. The session was opened by Minister of Health GSSR Prof. G.M. Maruashvili.

Doctor of Medical Sciences V.G. Gogibedashvili, director of the Institute of Health Resort Science of the Georgian SSR, delivered an extensive report on the scientific and practical work conducted by the institute. Also heard were reports by candidate of medical sciences S.A. Chishmarityan, director of the Institute of Health Resort Science of the Armenian SSR, and Prof. Shch. M. Gasanov, deputy director of the Institute of Health Science of the Azerbaydzhan SSR.

Reports on various health resort science and physiotherapy problems were subsequently heard. Three reports were devoted to health resort climatology.

In a report entitled "Climatological peculiarities of health resorts of the Armenian SSR" A.B. Bagdasaryan and R.A. Bagdasaryan (Yerevan) cited factual data describing the climate of the most well-known mountain health resorts of Armenia: Arzni, Dilizhan, and Dzhermuk. O. A. Bozoyan

(Yerevan) reported on aerochemical studies which had been conducted at these health resorts. M.O. Kordzakhiya, R.P. Kavkaside, and N.Sh. Gongladze (Tbilisi) submitted the report "Bioclimatic characteristics of the Borzhomi-Bakuriani group of health resorts", in which, in addition to a general climatic description, a detailed illustration was given of climatic elements having specially great significance from the point of view of medical climatology. The authors described three zones which they singled out in this area: the low-mountain, middle-mountain, and high-mountain.

A number of reports was dedicated to problems of the study of mineral springs and therapeutic muds.

V.G. Dzhaliashvili and T.Ye. Chichua (Tbilisi) told of the state of hydrogeological study of therapeutic mineral waters, noting that in Georgia there are 1300 mineral water springs, approximately 300 of which are recognized as most promising. Relatively well studied are the mineral water deposits of Borzhomi, Tskhaltubo, Tbilisi, Dzhava, Mendzhi, Sukhumi, etc., as well as of mud lava of Akhtala and lake mud of Kumisi.

In L.Ye. Chkhatarashvili's (Yerevan) report "Physico-chemical characteristics of therapeutic mud of Lake Kumisi" data on the content of certain trace elements and organic substances in this mud were set forth, Boron, arsenic, fluorine, iodine, bromine, humic acids, lignins, carotin, active esterogenic substances, etc., were observed in it. V.G. Kedrova's (Baku) report "Physicochemical properties of muds of the Azerbaydzhan SSR" continued a description of the saline waters and slime deposits of Beyukshor, Masazyr, and Binagadi lakes and outlined the prospects of their rational utilization.

R.S. Dzhauzhutova (Yerevan) acquainted the participants of the session with the varied health resort resources of Armenia, such as mineral springs for bathing and drinking, peat, and the climate. A.A. Kadyrov (Baku) reported on the geologic-hydrogeological characteristics of the hydromineral resources of the Adzhikend health resort.

G.A. Nevrayev (Moscow) told the participants of the session of the activities conducted in the State Institute of Health Resort Science and Physiotherapy on the study of organic substances contained in mineral waters. Studies of tests of approximately 40 different mineral waters showed that the number of organic substances present in all mineral waters fluctuates between 2-3 to 100-150 milligrams per liter. Mineral waters were found to contain humic acids, bitumens, fatty acids of low molecular weight, naphthenic acids, and substances of the phenol group. The latter were observed in

almost all the waters studied (except three) in amounts ranging from a few to 70-80 gamma per liter. The speaker pointed out that the organic substances observed in mineral water have unquestionable balneological value, since all of them can yield metalloorganic compounds, some of which (the low-molecular weight fatty and naphthenic acids) possess a skin-irritating effect, and the penetration of the skin by substances of the phenol group has been demonstrated by a number of pharmacological studies. The speaker appealed for the broad development of studies in this new field of balneology.

Four reports were devoted to problems concerning influence of climate upon the human organism. The Azerbaydzhian Institute Health Resort Science presented papers shedding light upon several aspects of the reaction of the organism to the effect of a mountain climate. In a report entitled "Effect of the health resort locality of Adzhikend upon the temperature and electrical resistance of the skin of neurasthenics" (Sh.M. Gasanov, A.G. Guseynov, and A.I. Gashimova) the authors, on the basis of electrophysiological studies, arrive at the conclusion that the mountain climate of Adzhikend has a favorable effect upon neurasthenic patients. In another report "Certain changes in the organism as the result of a complex of climatic factors of the mountain health resort locality of Chukhuryurt" (Ch. Kh. Agayeva) -- data were presented on the favorable effect of mountain climate upon healthy individuals vacationing at this health resort.

T.P. Kalandiya (Abkhaz Affiliate of the Institute of Health Resort Science of the Georgian SSR) submitted the report "Treatment of hypertension patients of the Sukhumi health resort" in which were summarized the results of many years of observations made by associates of the affiliate, which demonstrated the beneficial effect of the Sukhumi climate upon these patients. G.A. Ushveridze, R.P. Kavkasidze, L.P. Dzhikiya, and R.K. Gogibedashvili (Tbilisi) gave a medical evaluation, based upon an analysis of extensive data, of various classifications of types of weathers and offered their own classification based upon a genetic approach (cf. our journal No6, 1959).

Considerable work was conducted by health resort science institutes of the trans-Caucasian republics in the field of balneology and mud therapy. Attesting to this is a number of reports in this field submitted at the session. The Institute of Health Resort Science of the Armenian SSR is conducting a study of the therapeutic properties of the mineral waters of Ankavan. Four reports were devoted to this subject. The experimental work of R.A. Grigoryan "Effect of Ankavan mineral water upon the secretory function of the stomach" -> places

a scientific-foundation under the use of this mineral water in gastritis with reduced acidity. E.A. Minasyan in a report entitled "Effect of intake of Ankavan mineral waters upon certain functions of the liver in chronic hepatitis and hepatcholecystitis patients" presented the results of observations upon 100 patients. The author studied certain indicators of protein and fat metabolism and arrived at the conclusion that optimum results of treatment are observed when the water is drunk directly at the springs. Drinking bottled water produces a less pronounced therapeutic effect. After that L.Kh. Tumanyan told of his observations of the effect of the intake of this mineral water upon the exocrine function of the pancreas in 86 patients with hepatitis and hepatcholecystitis. The author arrives at the conclusion that this mineral water exerts a normalizing effect upon the exocrine function of the pancreas. The effect of Ankavan mineral water upon the biligenic and bile-secreting function of the liver and upon certain other indicators of its functional state in hepatitis and hepatcholecystitis patients was reported by A.A. Mashur. He ascertained that Ankavan water produces a high therapeutic effect, especially during treatment at a health resort.

Also evoking interest were the papers submitted by associates of the Azerbaydzhan Institute of Health Resort Science. Sh.M. Gasanov and T.A. Petrosyan reported on the use of the water of the mineral springs of the Apsheronsk peninsula in otolaryngology. K.S. Sadykh-zade reported on the results of the treatment with underwater lavages of the intestines of patients with diseases of the liver and bile ducts. R.Kh. Kadymova used, for the treatment of hepatcholecystitis patients, applications of Masazyr mud; for determining effectiveness of the treatment, she studied the carbohydrate function of the liver. A.F. Ragimli obtained a high therapeutic effect from the use of tampons made of Masa- zyr mud in the treatment of erosions of the cervix uteri. Recovery was noted in 15 of 30 patients.

The Institute of Health Resort Science of Georgia submitted two reports on balneotherapy and mud treatment. A.S. Abduladze, T.N. Ugulova, S.B. Kupubidze, A.D. Robakidze, T.N. Kakabadze, F.D. Tavamaisshvili, and T.K. Dzhaparidze illustrated the effectiveness of the treatment of infectious non-specific polyarthritis with Kumis mud in combination with exercise therapy, and hormone therapy. Sh.K. Pardzhanadze, M.N. Melikishvili, L.M. Tkemaladze, A.A. Gogoshvili, and Z.I. Oglobina acquainted participants of the session with new combinations of treatment of hepatcholecystitis patients, including subaqueous baths of Tbilisi thermo-sulfide water.

Three combinations, distinguished from one another by the assignment of different auxiliary methods of treatment during the intervals between the subaqueous baths, were proposed.

N.V. Mgelandze (Sukhimi) reported on the effect of Avadkhar mineral water upon the gastro-intestinal tract. Clinico-experimental studies established the beneficial effect of this water upon diseases of the stomach, liver, and bile ducts.

Then the session proceeded to reports on the activities carried out by experimental and biochemical departments of institutes.

A.N. Bakuradze, M.S. Dzhugeli, I.V. Bliadze (Tbilisi), in the report "Effect of the UHF electric field upon the cardiac activity of a frog" gave a physiological interpretation of the effect of a 2.8 to 6 meter-long wave UHF field created by a "Radma" apparatus (designed by V.A. Nikolayev).

T.N. Ugulova (Tbilisi) reported upon interesting bi-chemico-experimental investigations for revealing the role of ultraviolet radiation on the rate of regeneration of proteins of various organs and tissues and on blood serum protein fractions. The author, using the method of determining the inclusion of methionine marked by S<sup>35</sup> in the proteins of various organs in rats, ascertained that ultraviolet rays actively effect this process.

R.M. Meskhrikadze (Tskhaltubo) presented a report on the physiological mechanisms of the effect of Tskhaltubo thermo-nitro-radon baths in the treatment of hypertension patients. It set forth data on the effect of Tskhaltubo baths upon the higher branches of the central nervous system, as well as upon humoral factors of nervous excitation. It was established by the method of the study of conditioned and unconditioned vascular reflexes that under the influence of the taking of Tskhaltubo baths changes are noted in hypertension patients tending toward the normalization of mutual relations between the cortex and subcortex.

I.S. Kasimov (Baku) reported on the mechanism of action of Sirab mineral water. The author demonstrated that this mineral water can be successfully administered in gastritis attended by various disturbances of secretory function.

S.S. Baladzhanov (Institute of Health Resort Science of the Azerbaijan SSR) submitted experimental data concerning peculiarities of the effect of naphthalene petroleum and various fractions of it upon gastric secretion depending upon conditions of intake, dose, and other factors. The biological reduction of hydrocarbons of naphthalene petroleum was the subject of a report by A.Z. Babayev (Baku).

Also presented at the session were reports of a physiotherapeutic type. Among them were two works performed under the direction of Prof. V.G. Gogibedashvili -- "Effectiveness of the treatment of chronic gastritis patients by means of inductotherapy" (V.G. Gogibedashvili, Ye.I. Chilingarishvili, S.I. Yaralov, L.A. Abuladze, and D.V. Dzhishi) and "Effectiveness of the treatment of hypertension patients with adrenalin-electrophoresis in conjunction with kinesitherapy" (V.G. Gogibedashvili, Ye.I. Chilingarishvili, Sh.V. Nutsibidze, and S.P. Yaralov). The first of these places a scientific base under the use of inductotherapy in the treatment of chronic gastritis, while the second scientifically substantiates and practically demonstrates the feasibility of the use of adrenalin-electrophoresis in stages I and II A of hypertension.

G.K. Mkrtchyan (Yerevan) also reported on the use of inductotherapy in the treatment of hypertension patients. She told of the methods of treatment which she had developed and in which an extremely pronounced and stable hypotensive effect had been noted.

S.Kh. Agayev and B.B. Shakhnazarov (Baku) presented preliminary data of their observations upon the effect of inductotherapy upon the morphology of the peripheral blood in patients with metabolic and infectious polyarthritides of unexplained etiology.

The session also heard two survey reports: V.I. Sukharev (Moscow) analyzed the development of the health record therapy of skin diseases in the Soviet Union and outlined ways to improve the organization of this activity at health resorts of Georgia, Armenia, and Azerbaijan. M.Yu. Nodiya and M.A. Sharafyan (Tbilisi) in their report summed up and systematized all scientific data relating to the use of the mineral springs of Georgia in the treatment of diseases of the gastro-intestinal tract.

After the conclusion of the session a tour of the Borzhomi, Tskaltubo, Sukumi, and Gagry health resorts was organized for the guests from Armenia and Azerbaijan to acquaint them with the therapy serum at these resorts.

Problems of Exercise Therapy Discussed at the  
Ukrainian Republic Scientific Conference on  
Medical Control and Exercise Therapy

Following is the translation of an article by I.V. Muranov entitled "Voprosy lechebnoy fizicheskoy kul'tury na Ukrainskoy respublikanskoy nauchnoy konferentsii po vrachebnomu kontrolyu i lechebnoy fizicheskoy kul'ture" (English version above) in Voprosy Kurortologii, Fizioterapii, i Lechebnoy Fizicheskoy Kul'tury, No2, Mar/Apr, 1960, page 191.<sup>7</sup>

The conference, convened by the Ministry of Health UkSSR, the republic medico-physical culture dispensary, and the Kiev City Scientific Medical Society for Physical Culture, was held in Kiev at the beginning of May. Participating in the conference were scientific workers, specialists on medical control and exercise therapy (ET), instructors of chairs of medical higher educational institutions of the Ukraine, chief physicians and staff-members of oblast and city medico-physical culture dispensaries.

Considerable attention was devoted at the conference to ET problems. N.I. Chaykovskaya (Kiev), chief physician of the republic medico-physical culture dispensary, described the state of exercise therapy in the Ukraine and noted a number of shortcomings in the employment of this method in medical institutions of the UkSSR. N.I. Chaykovskaya paid special attention to the need for the broad application of ET remedies into the operational practice of rayon and oblast hospitals. The report of Prof. G.I. Krasnosel'skiy (Kiev) defined the regular tasks of scientific research work in the field of medical control and ET.

The study of the physiological mechanisms of this method was the subject of two reports. Prof. G.I. Krasnosel'skiy shed light upon the subject of the mechanisms of its action in diseases of the cardiovascular system. Proceeding from contemporary concepts concerning the pathogenesis and therapy of diseases of the blood-circulation organs, the speaker cited a number of new data on the physiological mechanisms of ET on the basis of which it was possible to devise new, physiologically substantiated methods for the employment of ET remedies in the complex treatment of diseases of the blood-circulation organs. The report of Prof. A.R. Kirchinskiy (Kiev) set forth the author's conceptions concerning the close relationship between physiological mechanisms of physiotherapy

and exercise therapy. Examining the effect of these methods from positions of reflex theory, the speaker outlined ways for their combined employment.

Candidate of medical sciences A.A. Putilova (Kiev) dwelled upon matters concerning the use of ET remedies in the conservative treatment of scoliosis. Scientific worker M.K. Panchenko (Kiev) reported upon results of the use of new exercise therapy methods in shoulder fractures. Problems of the rational organization of the therapy regimen in operations upon organs of the abdominal cavity were illustrated in the report of N.I. Koval' (Khar'kov).

L.A. Malikovskaya (Kiev) reported on the high effectiveness of ET remedies in the complex treatment of climacteric disturbances. Candidate of medical sciences S.V. Litovchenko and physician F.A. Glaz (Kiev) reported on the results of the use of ET in the complex treatment of progressive muscular atrophy.

A number of reports was devoted to the use of ET in the treatment of tuberculosis. M.A. Zhardinovskiy (Kiev) dwelled upon the use of this method in the complex treatment of spinal tuberculosis patients. V.I. Zorya (Khar'kov) told of the value of air baths in combination with other methods of the medico-health resort treatment of patients with various forms of pulmonary tuberculosis. Scientific worker V.I. Murza (Kiev) reported on the effect of ET upon the activity of the respiratory and circulatory organs of patients who had suffered the removal of a lung.

Several reports were devoted to new methods of assessing the effectiveness of ET. Candidate of medical sciences I.V. Lisovetskaya (Kiev) emphasized in her report the value of the method of oxyhemography for determining physical loads in diseases of the cardiovascular system. Data presented by N.Ya. Eglit (Khar'kov) showed the value of the method of individual simultaneous pneumography for evaluating the effectiveness of kinesitherapy in diseases of the respiratory organs.

The discussions which developed over the reports testified to the importance and practical value of the papers heard. The conference adopted a resolution aimed at improving the ET setup and the application of the results of the research work in the practise of medico-prophylactic institutions.